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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Arndt Glaesser

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EXAMINER

HOWELL, DANIEL W

ART UNIT

PAPER NUMBER

3726

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,206	Applicant(s) GLAESSER, ARNDT	
	Examiner Daniel W. Howell	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-17, 19-23, 25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-17, 20-23, 25 and 28 is/are rejected.
- 7) ☒ Claim(s) 19, 27, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 20 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Line 4 of claim 25 sets forth operation on "sample model," and claim 20 has been amended to add the limitation of the sample of the component. There is no basis in the specification as originally filed for any operation on a "sample model" or "sample of the component."

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 8-17, 21-23, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Koch (2001/0048857). The invention is described throughout the entire reference, such that it is advised to read the entire Koch document. Paragraphs [0003-0004] discuss the difficulty of machining "deeply recessed, hollowed out spaces" in workpieces, including parts used in the automobile and aircraft industry, such that it is clear that Koch contemplated the device being used to make a bladed rotor. Paragraph [0041] discusses making a CAD model of the workpiece to be made to give a sufficient definition of the workpiece surface, and this model represents the

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collision contour of the present claims. Paragraph [0039] states that the workpiece will be machined with a five-axis milling machine, such that the tool inclination may be adjusted around two of the axes. Paragraph [0043] states that the tool is provided with a 1st guide/defined path. Paragraphs [0055-0057] discuss that the tool may improperly collide with the workpiece surface, such that a 2nd guide path is provided by controlling the slope angle of the axis 1 of the tool. Paragraph [0059] discusses the “automatic (automated) collision avoidance.” The steps discussed in paragraphs [0055-0057] constitute monitoring and comparing. Regarding claim 10, the CAD model considers every surface of the workpiece, such that there are at least first and second surfaces/collision contours. Note how the description of figures 8 and 9 discusses protection of collision of the tool with any surface in a zone. Regarding claim 13, paragraphs 0056-0057 discuss comparing the tool location with the entire workpiece shape, including the situation “In the case that a spatial interference is found in a place *other than the working portion of the tool 2*, the present method can include the *step of predicting a collision between the two spatial envelopes*.” This “predicting” constitutes an error protocol/error message. Regarding claims 14-15, the tool shapes of figures 1a, 1b, and 1c, the envelopes of figures 8a, b, and c, and paragraph [0062] make it clear that Koch has contemplated the tool geometry when making sure that the tool will not improperly contact the workpiece. Regarding the generation of a collision signal of claim 21, and noting that paragraph [0055-0056] states that the Koch method includes noting “a heightened risk of collision,” and that the path of the tool is then controlled/alterd “in a manner that minimizes the danger of a collision,” the indication that there is a heightened risk of collision constitutes the act of “generating a collision signal,” and this signal is inherently an “error message/protocol” as per claims 22 and 23.

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Cilindro (4518288). In order to reduce costs and wear on machinery, it is common to test programming of a numerical control milling machine on a sample workpiece. Cilindro shows such a wax sample B. It is considered to have been obvious to have tested the device of Koch on a sample workpiece as shown by Cilindro in order to reduce operating costs and wear on the machinery.

4. Applicant's arguments filed 2-11-10 have been fully considered but they are not persuasive. At numerous places in the arguments, Applicant comments that the "collision contour" relates to and is defined by "the desired final contour of the milled component that is to be produced." There are various wordings of that "final contour" comment in the arguments. However, close reading of the claims will show that no such "final contour" language is in the claims. First, and on the contrary, newly added claims 29 and 30 contradict such a "final contour" argument. Note that claims 29 and 30 state that the collision contour "respectively corresponds exactly to only one of the edges of the component to be produced, and said at least one collision contour does not collectively define an entire topography of a surface of the structural component to be produced." If as in claims 29 and 30 one is considering only one area and excluding others, then the "final contour" of the workpiece is not being considered. Second, looking at claim 8, the claim language reads "at least one collision contour respectively

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corresponding to a surface or an edge of the at least one sidewall of the structural component to be produced.” There isn’t anything in that phrase to set forth a “desired final contour” limitation. Claim 8 later sets forth “the at least one collision contour corresponding to the surface or the edge of the structural component to be produced.” There isn’t any “desired final contour” limitation in the claim there either. Turning next to claim 21, language in section (b) reads “each said collision contour establishes a respective boundary which may not be crossed by said proposed tool paths to avoid damaging said desired milled shape of said milled component to be produced.” Once again, there is no “desired final contour” language in claim 21. Since the claims do not set forth that “desired final contour” language, the examiner will not respond to those parts of Applicant’s arguments. Applicant has criticized the Koch reference for being concerned with damage only to the particular area of the workpiece being machined at that moment, not other parts of the workpiece. Figure 8 and paragraphs [0056-0057] of Koch clearly show that is not the situation. As discussed in paragraph [0056-0057], Koch does take into consideration interference between the tool and an area of the workpiece not being milled at that very instant. Additionally, claims 8 and 21 define the collision contour broadly enough that a reference showing interference between the tool and the region being machined will indeed be sufficient to meet the claim language. Regarding claims 20 and 25, Applicant has pointed out that Koch does not discuss a “sample” model. Interestingly, *neither does Applicant’s specification as originally filed*, so note the new matter rejection above.

5. Claims 19, 27, 29, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Noting Applicant’s arguments on page 14 of the

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response, the scopes of claims 19 and 27 are *limited to* the edges of the component to be produced.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning the content of this communication from the examiner should be directed to Daniel Howell, whose telephone number is 571-272-4478. The examiner's office hours are typically about 10 am until 6:30 pm, Monday through Friday. The examiner's supervisor, David Bryant, may be reached at 571-272-4526.

In order to reduce pendency and avoid potential delays, Group 3720 is encouraging FAXing of responses to Office actions directly into the Group at FAX number to 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Daniel Howell of Art Unit 3726 at the top of your cover sheet.

/Daniel W. Howell/

Primary Examiner, Art Unit 3726